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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,154	08/20/2003	Akihiro Maezawa	KON-1812	6504
20311	7590	11/16/2005	EXAMINER	
LUCAS & MERCANTI, LLP 475 PARK AVENUE SOUTH 15TH FLOOR NEW YORK, NY 10016			MALEVIC, DJURA	
			ART UNIT	PAPER NUMBER
			2884	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,154

Applicant(s)

MAEZAWA ET AL.

Examiner

Djura Malevic

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/24/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,8,10-15,17,18 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8,10-15,17,18 and 20-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

The amendment filed 10/24/2005 was entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 –5, 7, 8, 10 –15, 17, 18, and 20 –22 are rejected under 35 U.S.C. 103(a) as being obvious over Isoda (US Pub. 2003/0034458) in further view of Chen et al. (US Patent 6,396,066).

Regarding claims 1 and 11, Isoda discloses a method of and a radiation image-converting panel comprising a substrate (support) [0043], a phosphor layer having thereon a stimulable phosphor [0042], which is formed by electron beam deposition. The said electron beam deposition is used to heat the evaporation source (vapor deposition) [0044], so that the stimuable phosphor layer exhibits a thickness of 100 μm to 1mm, which is within the recited range claimed by the applicant, 50 μm to 20mm.

Isoda does not disclose the support exhibiting: a thermal conductivity of 0.1 to $\text{Wm}^{-1}\text{K}^{-1}$; a plurality of layers; and having the uppermost layer exhibiting a glass transition temperature of 80 to 350°C.

Chen discloses a support comprised of two or more flexible substrates laminated or adhered to each other, thus disclosing a plurality of layers. Further, Chen teaches that the preferred flexible materials include polymeric films, such as polyethylene

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terephthalate and polyamides (Col. 2, Line 63). Alternatively, one or more substrates are tinted by the incorporation of conventional dyes such as carbon black, since carbon black absorbs stimulating radiation.

Example 1 (Col 8, Line 40) illustrates the preferred support taught by Chen.

Two lengths of polyethylene terephthalate film supports (or Polyamides) were mounted onto a roll laminator. The two film supports were set in motion around the rolls and a molten polyethylene was extruded into the nip (between or in the middle), chilled and reformed as a solid, adhering the two polyester supports and forming a laminated structure. The polyethylene used in this instance was tinted black with a concentrated carbon black, thus disclosing a support comprised of a polyimide layer, carbon layer, and a polyimide layer in that order. Note, the thermal conductivity of the polyethylene terephthalate film at 23C is $0.13 - 0.15 \text{ Wm}^{-1}\text{K}^{-1}$, which is within the recited range claimed by the applicant, $0.1 - 20.0 \text{ Wm}^{-1}\text{K}^{-1}$. Also, polyethylene terephthalate, which is the uppermost layer exhibits a glass transition temperature within the claimed range by the applicant, 80 to 350°C. Isoda and Chen are analogous art because they teach radiation image storage panels.

It would have been obvious at the time the invention was made to one skilled in the art to modify Isoda to include the preferred support such as that taught by Chen in order to prevent backscattering by absorbing stimulating radiation therefore, achieving added precision to the radiation image storage phosphor.

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Regarding claims 2 - 4 and 12 – 14, Isoda discloses the stimuable phosphor represented by the following formula, which is the same formula as the applicants by way of variables that convey the same entities (Page 2, Par. 18):



M^I being at least one alkali metal element selected from the group consisting of Cs, Li, Na, K and Rb (Page 2, Par. 19).

M^{II} being at least one divalent metal element selected from the group consisting of Be, Mg, Ca, Sr, Ba, Ni, Cu, Sn and Cd (Page 2, Par. 19).

M^{III} being at least one trivalent metal element selected from the group consisting of Sc, Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Al, Ga, and In (Page 2, Par. 19).

X , X'_2 and X''_3 are at least one halogen selected from the group consisting of F, Cl, Br and I (Page 2, Par. 19).

Where b, c and z satisfy the following conditions:

$$0 \leq b \leq 0.5; 0 \leq c \leq 0.5; \text{ and } 0.0001 \leq z \leq 0.01 \text{ (Page 2, Par. 19).}$$

Regarding claims 5 and 15, Isoda's disclosure of CsBr:Eu (Page 3, Par. 42) as the stimuable phosphor is inherently represented by the formula: $M^I X : eA$.

Regarding claims 7, 8, 10, 17, 18, and 20, Chen discloses a support comprised of a polyimide layer (polyethylene terephthalate), carbon layer, and a polyimide layer in that order (example 1), thus comprising one polymeric compound, polyethylene terephthalate, and the specific order claimed.

Regarding claims 21 and 22, Chen discloses that the uppermost layer is a polyimide layer (example 1).

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. (The support taught by Chen comprises layers with the same materials as currently claim and thus inherently exhibits the claimed glass transition temperature).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Djura Malevic whose telephone number is


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571.272.5975. The examiner can normally be reached on Monday - Friday between 8:30am and 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Djura Malevic
Patent Examiner
Art Unit 2884
571.272.5975.



DAVID PORTA
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